

Press release

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## **Banking secrecy can be kept: Swiss consortium achieves important step towards adoption of blockchain in finance industry**

**Since September 2016, a Swiss finance industry consortium is working on a blockchain-based transaction platform for securities that are traded Over-The-Counter (OTC). During the project, the research team has overcome important technological hurdles that hamper blockchain adoption in the financial sector: Privacy of business participants is kept, and the blockchain system is able to scale better.**

Last summer, the Institute of Financial Services Zug IFZ of the Lucerne University of Applied Sciences and Arts and the Swiss companies InCore Bank, Inventx, SIX, Swisscom, ti&m and Zürcher Kantonalbank formed a consortium to create a Blockchain-based clearing- and settlement system for OTC Swiss equities. The project is supported by the Commission for Technology and Innovation (CTI). All financial institutions active in Switzerland are invited to join.

### **Banking secrecy on the blockchain**

Blockchain technology (see box) has many benefits: To begin with, data is stored securely on many computers, and it is immutable. Further, blockchain participants cannot use a fake identity, which increases mutual trust. Finally, so called "Smart contracts" increase the efficiency of interaction between participants, because interaction terms are automatically enforced by the blockchain. On the other hand, there are challenges when using the blockchain in the context of financial markets. The use of crypto-addresses for identity is problematic: no bank likes providing its competitors with precise information about its transactions. Also, the banking secrecy must be kept by law.

The consortium has addressed the privacy issue with an encryption module, which completes the Ethereum blockchain. It ensures that participants see only information that corresponds to their role, and that confidentiality is kept. At the same time, authorities who need to investigate specific cases of financial crime can obtain access to the identity behind transactions. "Our privacy solution paves the way for the usage of the Ethereum blockchain in financial markets," says project manager Mathias Bucher.

Another challenge that the team faced is the storage of large data sets in various formats on the blockchain. "To scale the system, we complemented the blockchain with a distributed database that is also encrypted," explains Bucher.

### **Legal- and regulatory aspects as part of roll-out**

In the coming weeks, the consortium will tackle the integration of the blockchain solution with the legacy systems of the connected banks, and it will elaborate with SIX the most efficient way how to process payments. Very important is the clarification of legal- and regulatory aspects of the solution. "We will actively reach out to legislators and supervisory authorities to explain the technology and outline its advantages," says Bucher. The Swiss National Bank has already been briefed, and is monitoring the project progress.

Finally, it will be crucial to establish a suitable form for operating the blockchain platform and coordinating the consortium. Smart contracts will play an important role here and complement the legal structure of the operative entity.

Website of the OTC Swiss Blockchain Consortium with further information and a prototype demo version: [www.otc-blockchain.ch](http://www.otc-blockchain.ch)

**What is blockchain?**

The blockchain is a decentralized electronic ledger (a transaction database), with duplicate copies on thousands of computers around the world. None of the participants in the blockchain network can alter any data retrospectively, which means everyone can fully trust the data. Additionally, participants of the blockchain network can save agreements of how to interact on the blockchain, in so-called "smart contracts". These "smart contracts" are executed autonomously by the blockchain, and cannot be changed unilaterally by any party. As a result, the blockchain enables the efficient cooperation of parties who don't need to know or trust each other.

**Contact for media:**

Lucerne University of Applied Sciences and Arts  
Institute of Financial Services Zug IFZ  
Dr Mathias Bucher, Project Manager  
T +41 41 757 67 83, email: [mathias.bucher@hslu.ch](mailto:mathias.bucher@hslu.ch)

**Lucerne University of Applied Sciences and Arts**

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